

CECW-E

**DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
Washington, D.C. 20314-1000**

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Circular  
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**Expires 30 November 05  
Engineering and Design  
STABILITY ANALYSIS OF CONCRETE STRUCTURES**

**1. Purpose.** This circular transmits criteria for stability analysis of concrete gravity structures. Stability refers to resistance to sliding and floatation, limits on the eccentricity of the resultant of the applied loads, and limits on the bearing capacity of the foundation materials. This criteria applies to all types of structures founded on rock or soil, such as: dams, outlet works, navigation locks, floodwalls, and pumping stations. This draft manual is not applicable to piles or caissons, or to structures founded on these elements.


**2. Applicability.** This circular applies to all USACE commands having responsibilities for Civil Works projects.

**3. Distribution.** This circular is approved for public release. Distribution is unlimited.

**4. Discussion.** The draft manual is written to be compatible with risk-based planning and design methods currently being implemented within USACE. It consolidates and standardizes stability requirements which were previously contained in several other publications. Changes contained in Chapters 3 and 4 will provide adequate safety factors for all types of structures and loading conditions, while reducing excess conservatism for infrequent loadings of short duration. This will result in project cost savings when compared to some structures designed using previous criteria. Stability criteria in other manuals is being revised to be consistent with this draft manual. In the interim, where there are conflicting stability criteria, the provisions of this draft manual shall govern.

**5. Action Required.** This EC should be used as interim policy and guidance pending publication of the final EM. Any comments regarding improvements or clarifications should be submitted to HQUSACE (CECW-E), Washington, DC 20314-1000, within two years of publication of this EC.

FOR THE COMMANDER:



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8 Appendices  
(See Table of Contents)